



4742

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Kori et al.

PATENT APPLICATION

Serial No: 09/625,336

Group Art Unit: Unassigned

Filed: July 25, 2000

Examiner: Unassigned

For: METHOD AND SYSTEM FOR CONTROLLING THE PRESENCE OF
FLUORINE IN REFRACTORY METAL LAYERS

Consent of Assignee, Applied Materials, Inc. Under 37 CFR § 1.48(a)

I, JOSEPH J. SWEENEY, states as follows:

1. I am over the age of eighteen years and am an officer of the Assignee of the rights in the above-identified patent application by virtue of my position as Group Vice President and Assistant Secretary of Applied Materials, Inc., a Delaware Corporation having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054.

2. I proffer this consent in support of a Combined Petition and Amendment Under 37 CFR § 1.48(a) which I am informed and believe will be filed herewith to amend the inventive entity in the above-identified patent application to include Ashok Sinha, a citizen of the United States having a residence address of 4176 Hubbart Drive, Palo Alto, California 94306 and Ming Xi, a citizen of the People's Republic of China having a residence address of 138 Beaumere Way, Milpitas, California 95035. To that end, please find attached hereto a Statement Under 37 CFR, 3.73 (b) establishing the right of the assignee to take action in the patent application identified above in paragraph 1.

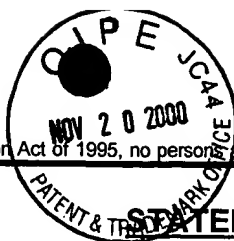
Date: _____

11/14/00


Joseph J. Sweeney
Group Vice President and Assistant
Secretary

EXHIBIT H

RECEIVED
DEC - 4 2000
TECHNOLOGY CENTER 1700



4742

PTO/SB/96 (6-98)

Approved for use through 09/30/2000. OMB 0651-0031

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)Applicant/Patent Owner: Joseph J. SweeneyApplication No./Patent No.: 09/625,336 Filed/Issue Date: July 25, 2000Method and System for Controlling the Presence of Fluorine In
Entitled: Refractory Metal Layers

APPLIED MATERIALS, INC. , a Delaware Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: Mori Kori To: Applied Materials, Inc.
The document was recorded in the Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.
2. From: Alfred W. Mak To: Applied Materials, Inc.
The document was recorded in the Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.
3. From: Jeong Soo Byun To: Applied Materials, Inc.
The document was recorded in the Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☒ Additional documents in the chain of title are listed on a supplemental sheet.

- ☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]

The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of the assignee.

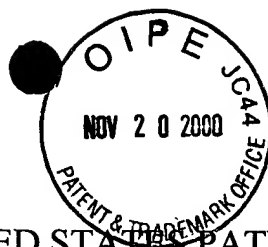
11/14/00
Date

[Signature]
Signature
Joseph J. Sweeney
Typed or printed name
Group Vice President and
Assistant Secretary
Title

TECHNOLOGY CENTER 1700

DEC - 4 2000

RECEIVED



4742

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Kori et al.

PATENT APPLICATION

Serial No: 09/625,336

Group Art Unit: Unassigned

Filed: July 25, 2000

Examiner: Unassigned

For: METHOD AND SYSTEM FOR CONTROLLING THE PRESENCE OF
FLUORINE IN REFRACTORY METAL LAYERS

Supplemental Sheet To Statement Under 3.73(b) Listing Documents In

The Chain of Title

From: Lawrence Chung-Lai Lei To: Applied Materials, Inc.

From: Hua Chung To: Applied Materials, Inc.

From: Ashok Sinha To: Applied Materials, Inc.

From: Ming Xi To: Applied Materials, Inc.

RECEIVED
DEC - 4 2000
TECHNOLOGY CENTER 1700



Case # 004742/AMI-00-07

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Moris Kori 55 Hamilton Court Palo Alto, California 94301	2)	Alfred W. Mak 32722 Fellows Court Union City, California 94587
3)	Jeong Soo Byun 20975 Valley Green Drive #257 Cupertino, California 95014	4)	Lawrence Chung-Lai Lei 1594 Country Club Drive Milpitas, California 95035
5)	Hua Chung 4645 Piper Drive San Jose, California 95129		

(hereinafter referred to as Assignors), have invented a certain invention entitled:

MEHTOD AND SYSTEM FOR CONTROLLING THE PRESENCE OF FLUORINE IN REFRACTORY METAL LAYERS

for which application for Letters Patent in the United States is filed herewith,

for which application for Letters Patent in the United States was filed on 07/25/2000 under Serial No. 09/625,336, executed on even date herewith; and

WHEREAS, Applied Materials, Inc., a corporation of the State of Delaware, having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as the Application), and the invention disclosed therein (hereinafter referred to as the Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as the Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.

2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed;

TECHNOLOGY CENTER 1700

DEC-4 2000

RECEIVED

(b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefor and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.

4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

5. Said Assignors hereby authorize and request the attorneys of record to insert, where indicated above, the application number and filing date of said application when known

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

1) 8/23, 2000 Moris Kori
Moris Kori

2) 8/7, 2000 Alfred W. Mak
Alfred W. Mak

3) 8/8, 2000 Jeong Soo Byun
Jeong Soo Byun

4) 8/23, 2000 Lawrence Chung-Lai Lei
Lawrence Chung-Lai Lei

5) 8/25, 2000 Hua Chung
Hua Chung



RECEIVED
DEC - 4 2000
TECHNOLOGY CENTER 1700



ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Ashok Sinha 4176 Hubbart Drive Palo Alto, California 94306	2)	Ming Xi 138 Beaumere Way Milpitas, California 95035
----	--	----	---

(hereinafter referred to as Assignors), have invented a certain invention entitled:

METHOD AND SYSTEM FOR CONTROLLING THE PRESENCE OF FLUORINE IN REFRACTORY METAL LAYERS

for which application for Letters Patent in the United States is filed herewith,

having serial number 09/625,336, filed on July 25, 2000 herewith

WHEREAS, Applied Materials, Inc., a corporation of the State of Delaware, having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as the Application), and the invention disclosed therein (hereinafter referred to as the Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as the Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.

2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefore and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its

RECEIVED
DEC - 4 2000
TECHNOLOGY CENTER

successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.

4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

5. Said Assignors hereby authorize and request the attorneys of record to insert, where indicated above, the application number and filing date of said application when known.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

1) _____, 2000

Ashok Sinha

2) 10/30/00, 2000

Ming Xi
Ming Xi



RECEIVED
DEC - 4 2000
TECHNOLOGY CENTER 1700



ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Ashok Sinha 4176 Hubbart Drive Palo Alto, California 94306	2)	Ming Xi 138 Beaumere Way Milpitas, California 95035
----	--	----	---

(hereinafter referred to as Assignors), have invented a certain invention entitled:

METHOD AND SYSTEM FOR CONTROLLING THE PRESENCE OF FLUORINE IN REFRACTORY METAL LAYERS

for which application for Letters Patent in the United States is filed herewith,

having serial number 09/625,336, filed on July 25, 2000 herewith

WHEREAS, Applied Materials, Inc., a corporation of the State of Delaware, having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as the Application), and the invention disclosed therein (hereinafter referred to as the Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as the Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.

2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefore and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its

RECEIVED
DEC - 4 - 2000
TECHNOLOGY CENTER 1700

successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.

4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

5. Said Assignors hereby authorize and request the attorneys of record to insert, where indicated above, the application number and filing date of said application when known.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

1) 11/6/, 2000

Ashok K. Sinha
Ashok Sinha

2) _____, 2000

Ming Xi